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ABSTRACT

The adequacy of mean length of utterance (MLU) as a criterion for matching retarded and normally developing children was investigated. Six normally developing and four retarded subjects were matched on MLU. Although matched on MLU, these two groups of children demonstrated both quantitative and qualitative differences in their use of language. Normally developing children produced a higher rate of intelligible speech and a greater proportion of that speech was devoted to spontaneous and multi-word utterances. In addition, these normally developing children demonstrated larger spontaneous vocabularies than the mentally retarded children. It appears that these differences were not simply a function of rate of intelligible speech. It is concluded that the data of this study support the argument made by Klee (1985) that MLU does not discriminate children's profiles of grammatical development. Linguistic matching of children demands multiple measures of child language. (Author/RH)

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The Inadequacy of MLU as a Matching Criteria For Normally Developing and Handicapped Subjects

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Abstract

The adequacy of mean length of utterance (MLU) as a matching criteria for retarded and normally developing children was investigated. Six normally developing and four retarded subjects were matched on MLU (1.01 - 1.25). Although matched on MLU, these two groups of children demonstrated both quantitative and qualitative differences in their use of language. Normally developing children produced a higher rate of intelligible speech; a greater proportion of that speech was devoted to spontaneous single and multi-word utterances. In addition, these normally developing children demonstrated larger spontaneous vocabularies than the mentally retarded children. It appears that these differences were not simply a function of rate of intelligible speech.

Introduction

In comparative studies, matching retarded and normally developing children on some criteria has been assumed to equalize the groups in some way. Studies of language development have frequently adopted mean length of utterance (MLU) as "an excellent simple index of grammatical development because almost every new kind of knowledge increases length" (Brown, 1973). Thus, children matched on MLU have been assumed to demonstrate similar levels of linguistic competence. This may well be the matching criteria of choice for normally developing children, but it has been suggested that such a measure is insensitive to the atypical language seen in some retarded children (Harris, 1983). Issues surrounding the matching of retarded and normally developing children has not been well researched. MLU matching may mask both quanti-

tative and qualitative differences in child language. These differences may be a function of rate of spontaneous speech, or they may reflect a combination of other linguistic parameters, for example, vocabulary size or pragmatic function.

Methods

This data set represents a subset of data collected on 20 mother-child dyads who participated in an 18-month longitudinal study of language development. The subjects for this study were 10 children and their mothers. Six of these children were normally developing and four were identified as moderately retarded. Comprehensive behavioral assessments and Bayley scores determined group membership. Data on mother-child interactions were collected during home observations. This re-analysis focuses only on the differences in the normally developing and retarded children's use of language. Mean length of utterance was calculated by dividing the total number of morphemes by the total number of utterances in a given sample (Brown, 1973).

Measures

Mean length of utterance (MLU): Total number of morphemes divided by total number of utterances in a given sample.

Spontaneous single word utterances: Those one word utterances which were not self repetitions or imitations of a previous mother verbalization.

Different spontaneous single word utterances: The total number of novel one word utterances found in a sample.

Spontaneous multiword utterances: Those utterances, more than one word, which were not self repetitions or imitations of a previous mother verbalization.

Different spontaneous multiword utterances: The total number of novel multiword utterances found in a sample.

Spontaneous vocabulary: Novel words in a given

sample that were not self repetitions, or imitations of a previous mother verbalization.

Results

Figure 1 demonstrated the closeness of the MLU match for these two groups. Rate of verbalizations did distinguish the groups. However, consideration of percent of intelligible speech appeared to equalize the groups. Retarded children may be less verbal, but their output was as intelligible as that observed in normally developing children. A more detailed analysis of the speech illustrated how the groups differed (Figure 2). Normally developing children used more spontaneous single and multiword utterances than did retarded children. In addition, the normally developing children had larger spontaneous vocabularies than did the retarded children. Normally developing children had about 30 words in their spontaneous vocabularies, whereas retarded children produced only about 12 different words spontaneously. These results show that

differences between retarded and normally developing children were not simply a function of rate of intelligible speech.

Discussion

The data in this study support the argument made by Klee (1985) that MLU does not discriminate children's profiles of grammatical development. Klee's argument was based only on data on normally developing children. Our data show that MLU may be even less adequate as a matching criteria when comparing normally developing and retarded children, because the language of the retarded children at one MLU level may differ to an even greater degree than that of the normally developing children. If MLU is not an adequate matching criteria as appears to be the case, then the results of previous studies employing MLU as a matching criteria should be viewed with caution. The quantity of intelligible speech seen in the retarded children may be a function of rate of spontaneous speech. The retarded chil-

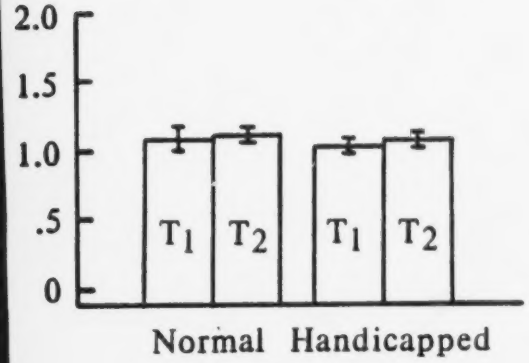
dren may be repeating mother models, whereas the normally developing children may use more novel words. These two groups of children, so closely matched on MLU, clearly have different language profiles. Our data indicated that this was not simply a function of rate of intelligible speech; rate of spontaneous speech may be equally important.

Implications

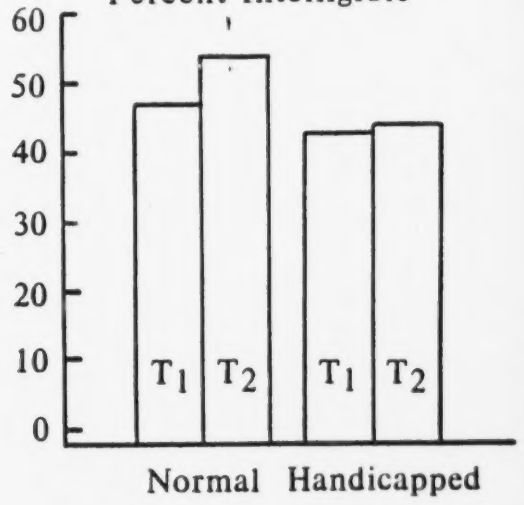
Differences in child language, as well as caregiver behavior, observed between normally developing children and the retarded children may have been the result of a grammatical/syntactic mismatch, rather than an indication of deviance in the development of the retarded children's language. Differences in caregiver behavior may have reflected adult matching to different child linguistic behavior rather than be evidence of deficiencies in the retarded child's verbal environment. The implications of this study are that the linguistic matching of children demands multiple measures of child language.

TOTAL UTTERANCES PERCENT INTELLIGIBLE AND MEAN LENGTH OF UTTERANCE

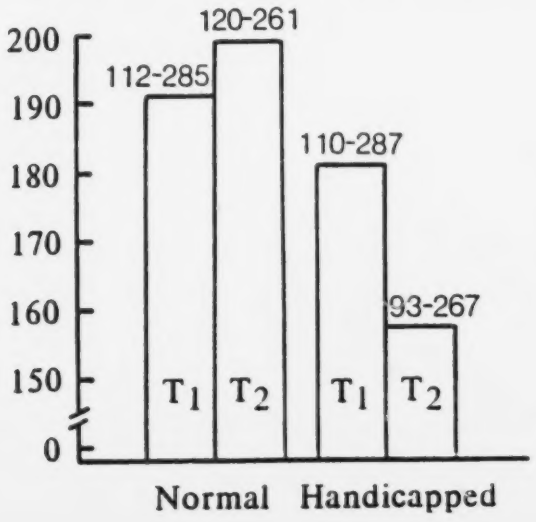
Mean Length of Utterance



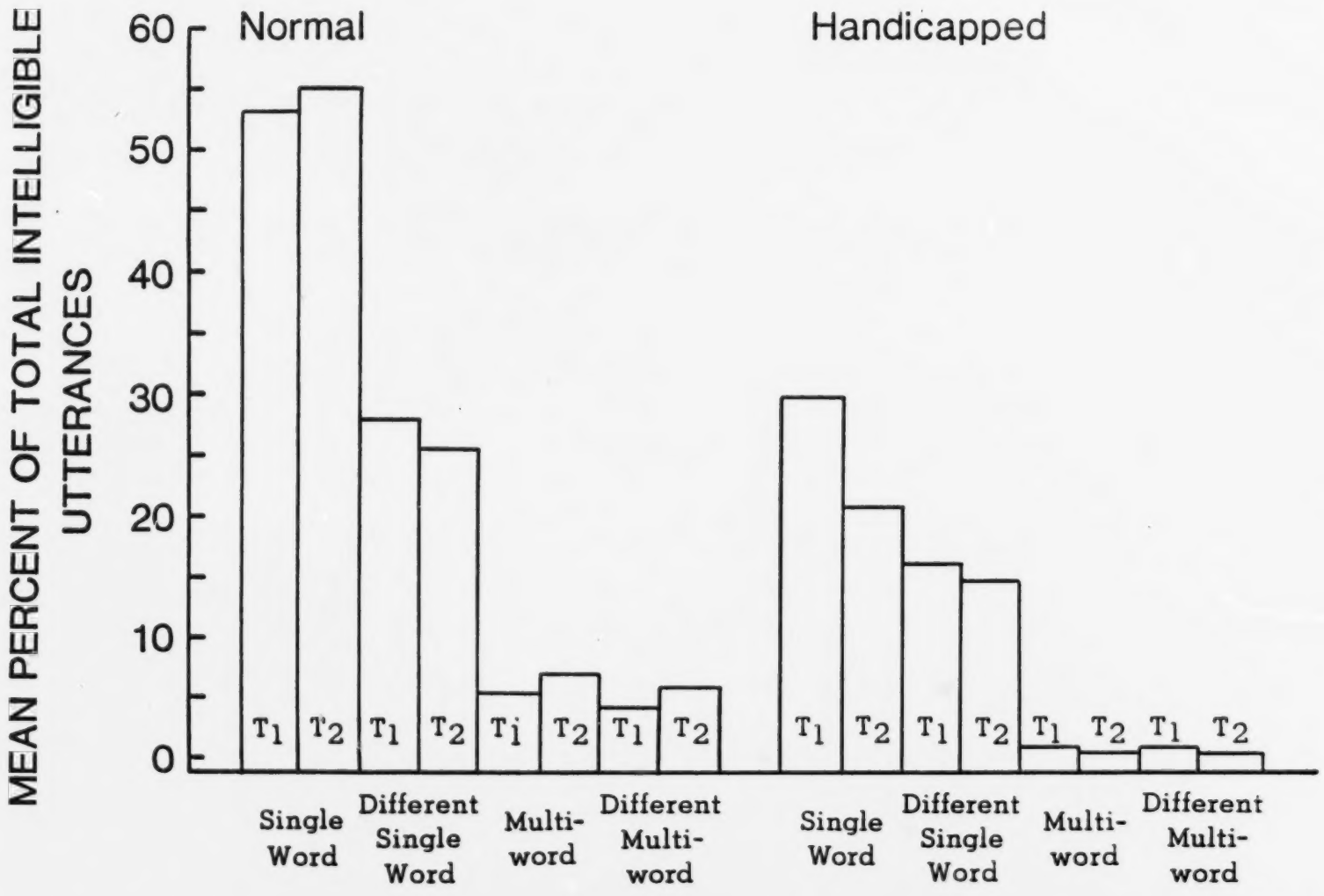
Percent Intelligible



Total Number of Utterances per Sampe



DISTRIBUTION OF SINGLE WORD & MULTIWORD UTTERANCES



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